

Policy and Administrative Tools

Presented at the Clark Fork River Basin Groundwater
Policy Conference

The University of Montana
November 9, 2006

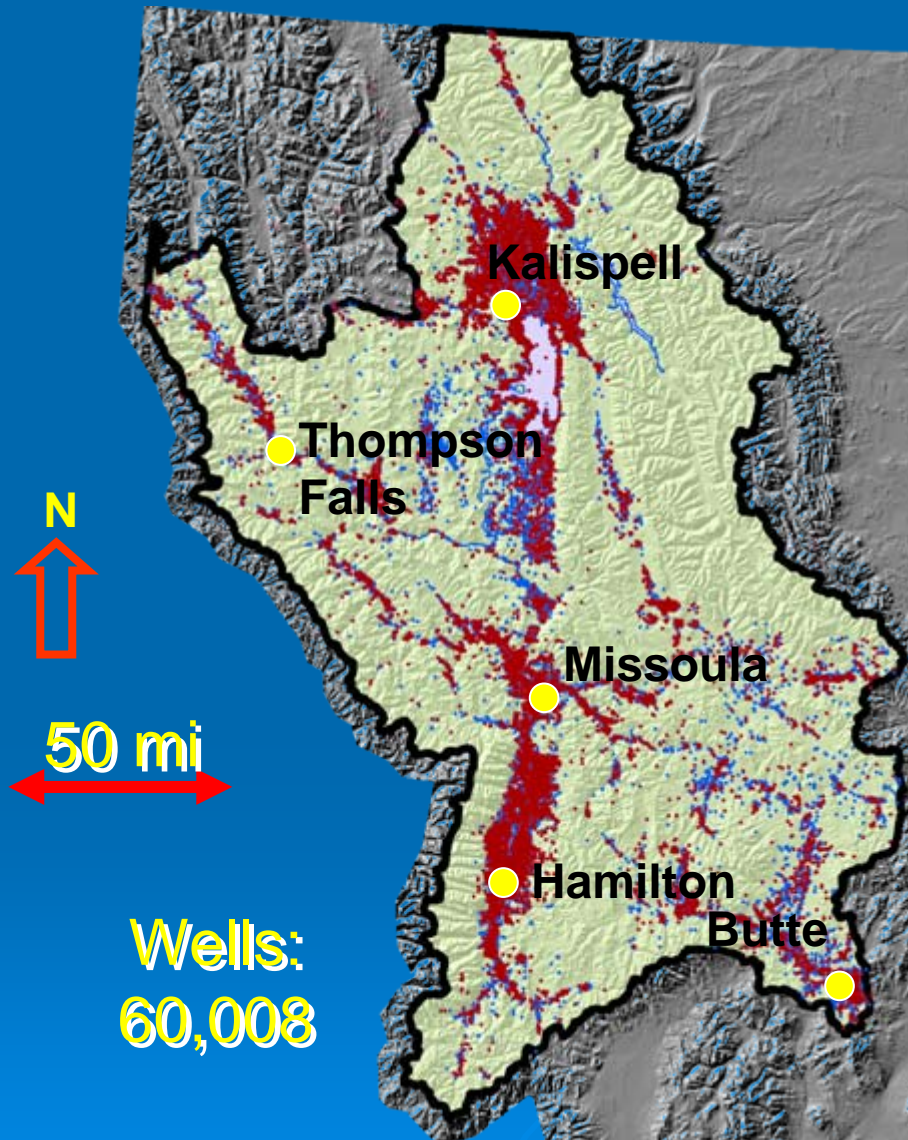
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Key issues emerging from this conference, from the Groundwater Technical Conference in late September, and the NW Water Policy and Law Symposium that took place in Bozeman in September:

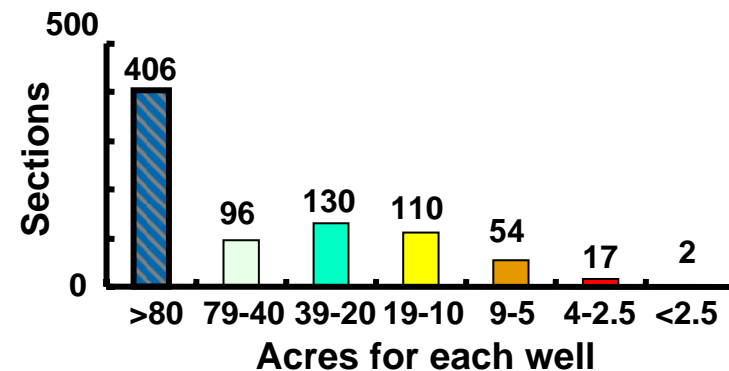
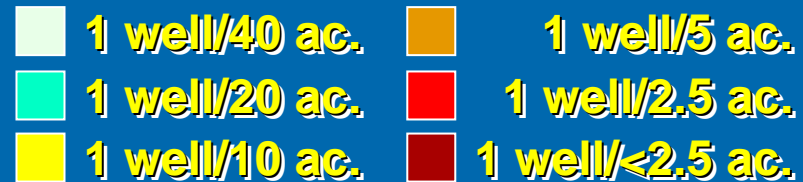
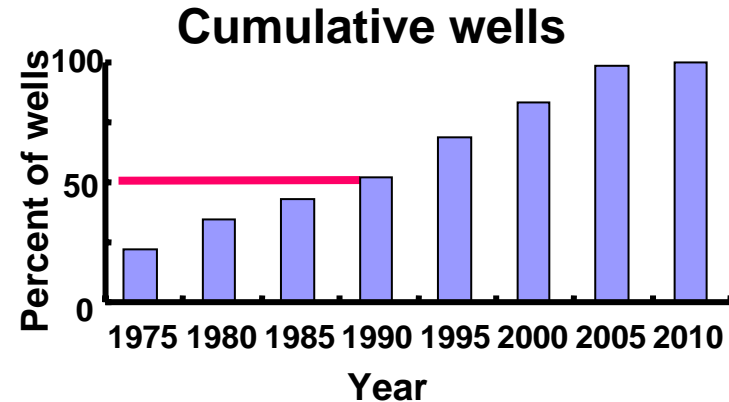
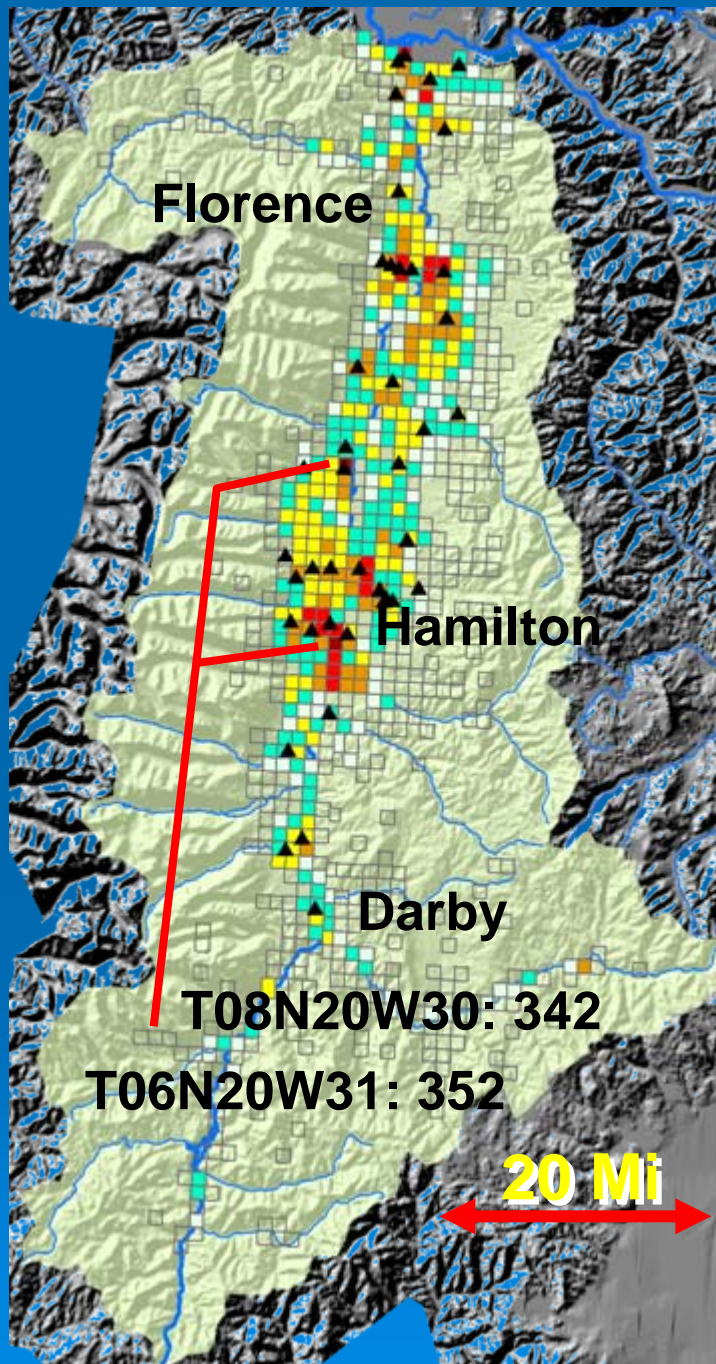
- Rural residential and related development in Western Montana counties is occurring at a very rapid rate today – this has been the trend for the last decade or so, and there is little to suggest that this will be slowing in the near term.

Ground-water development



- The Legislature has closed the Upper Clark Fork and Bitterroot basins to new ground-water development.
- Well density maps provide a way to evaluate where growth has occurred.

Bitterroot



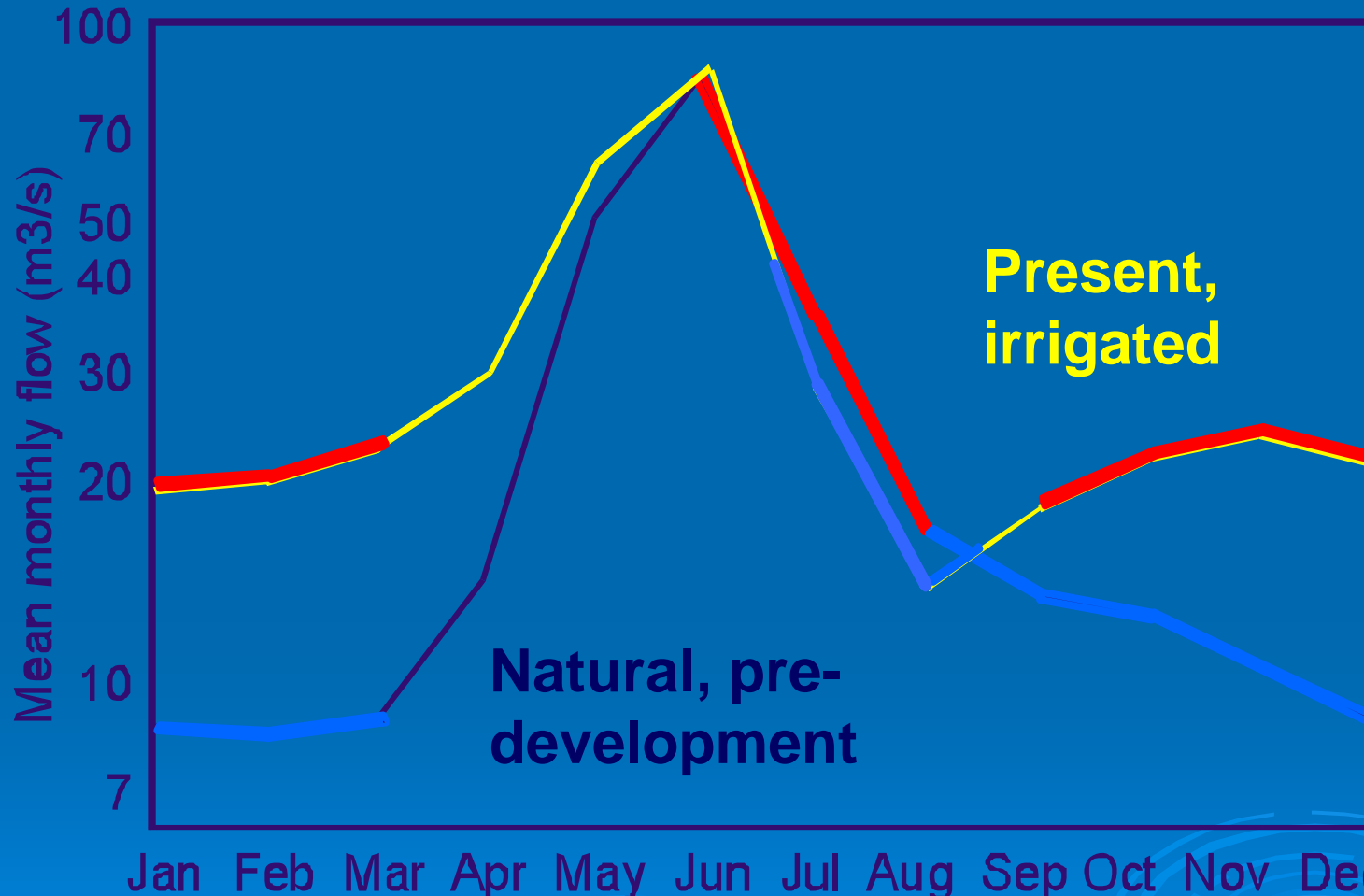
18,894 wells: 87% domestic

Key Issues (Cont'd)

- This development is occurring because county land use controls in Western Montana are virtually non-existent.
- This development is affecting the relationships between groundwater and surface water in Montana stream basins.



Natural vs. Irrigation Hydrograph (Gallatin River)



Source: Kendy & Bredehoeft. 2006. Role of Artificial Ground-water Recharge in Streamflow Management: Past, Present, and Future. Presented at the Groundwater Technical Conference, UM, Sept. 27, 2006.

Key Issues (Cont'd)

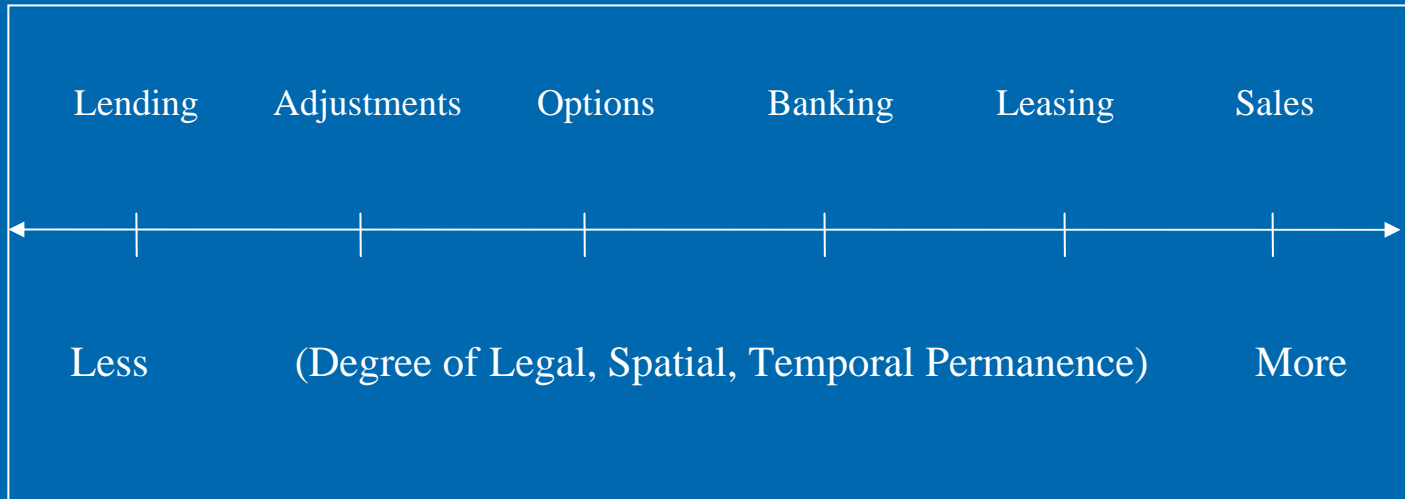
- Senior water right holders have come to rely on this altered system.
- Additionally, ecosystems have adjusted to the “surface water irrigation” flow alterations.
- And lastly, at least for the purposes of this discussion, the new and expanding use of stream flow augmentation accompanying new groundwater right approval, serves to further complicate the issue of “the natural hydrograph” because of changes in the timing of withdrawals, lag times in surface water effects from distant groundwater pumping sites, and of course the ever present and quite fecund exempt well.

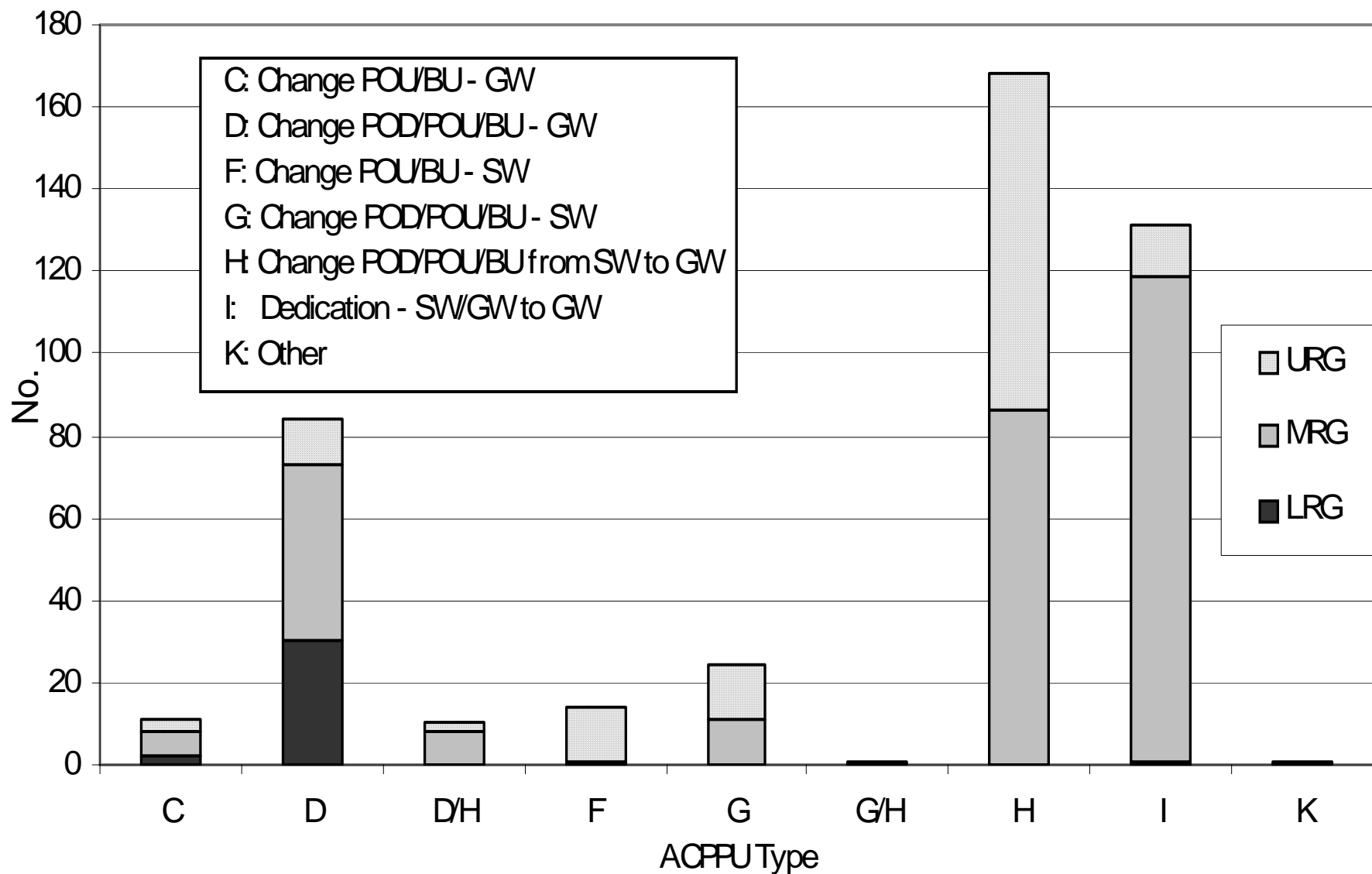
Some Observations

- New development places new demands on fully and over appropriated water resources.
- It appears that we have a situation in which our faith and certainty in the existing codes for water apportionment are diminishing, and new policy tools and approaches are necessary.

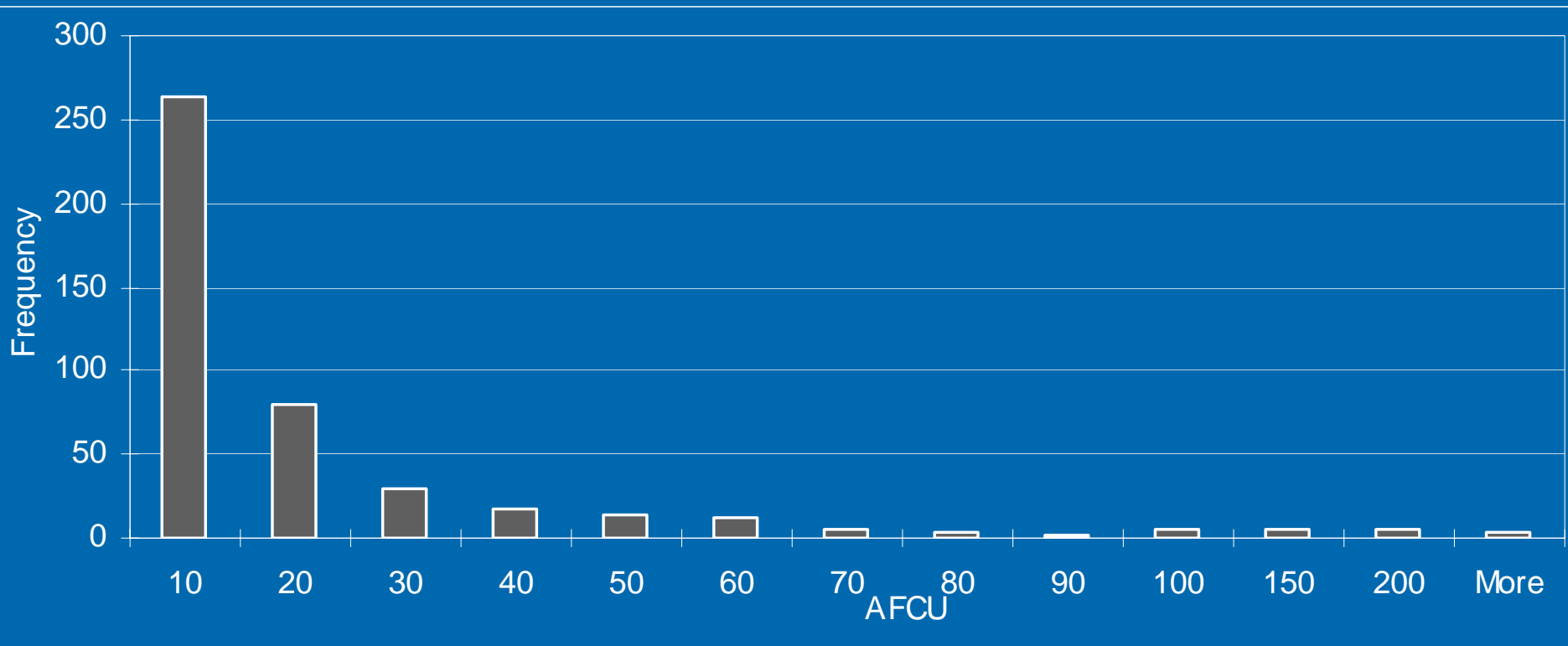


Continuum of Water Transfer Mechanisms





Frequency Histogram - Transfer Sizes



Third-Party Effects

- Economic Effects
 - For Individuals, Families, Communities, and/or Regions
- Environmental Effects
 - For Terrestrial and/or Aquatic Ecosystems
- Sociocultural Effects
 - For Unique Cultural Groups or Entities

Third-Party Effects

- A considerable amount of research conducted in Western states that have either experimented with market based water transfers or become de facto transfer addicts (including my own in New Mexico), is that this practice, unless very carefully managed, can further perturb “the system” thus producing economic, ecological, and/or socio-cultural third party effects.
- In order to minimize such effects, codes that allow them to be considered and which give standing to affected parties or their advocates are important.

Some Principles

- Before we begin to consider specific water allocation policies, or other policies, it is perhaps important to consider two principles of, or approaches to, environmental management:
 - Precautionary Principle
 - Adaptive Management

Most important is the Question of Goals

- What is it that we wish to accomplish with new policy tools for groundwater and/or surface water?
 - Controlling growth & development?
 - More effectively managing a resource that is being increasingly taxed?
 - Maintaining and restoring environmental quality?
 - Protecting economic activities of rural communities?

Another Observation or Two

- Controlling land use w/ water policy is like giving immunological boosters to the patient after they have contracted the disease.
- What is needed is land use management or control policies first, and the development of such policies such that they are precautionary in nature, and can allow for adaptive management.

A Modest Proposal

- We need to consider land use controls.
- We can look to other states for tools that will work for us.

A Modest Proposal

- Other state planning models:
 - Oregon: Urban Growth Boundaries and Rural Planning
 - Vermont: Environmental Review for Impacts, Compatibility, and Capital Gains Tax to Discourage Land Speculation.
 - Maryland: Three pronged approach with important financial considerations. Priority funding areas, farm legacy program, and Green Infrastructure programs.

A Modest Proposal

- Other tools:
 - Purchase of Development Rights (PDRs) – outright fee simple purchase of development rights.
 - Transfers of Development Rights (TDRs) – development banks.
- We are swimming in money for development. We can leverage this and implement local programs to direct development to appropriate areas!

Three Last Observations

- In Montana, we have to recognize that many of our Western counties are planning, but they are not managing growth or land use.

Three Last Observations

- Folks, we won't solve the water use problems without first addressing the issue of where development should be encouraged and discouraged, and what this development should look like.



Three Last Observations

- Until we do we are going to be chasing our tails, ***barking madly*** all the while.

